REMARKS

There are now pending in this application Claims 10-34, with Claims 22 and 32 being independent. Claims 1-9 have been cancelled without prejudice or waiver of the subject matter contained therein. Claim 21 has been withdrawn from consideration. Claims 22-32 are newly added.

In view of the above amendments and the following remarks, favorable reconsideration, entry of the amendments, and early passage to issue of the above application are respectfully requested.

In the Official Action dated May 30, 2003, Claims 1, 2, 6-10, and 17 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,107,703 (Korenaga). Claims 3-5 and 18-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Korenaga '703 in view of U.S. Patent No. 6,417,914 (Li). In view of the above amendments and for the following reasons, the rejections are respectfully traversed.

Newly-presented independent Claim 22 relates to a linear motor comprising a coil, a magnet, one of said coil and said magnet moving relative to the other of said coil and said magnet by flowing a current to said coil, and a metal film arranged in at least a portion between said coil and said magnet.

Newly-presented independent Claim 32 relates to linear motor comprising a coil, a magnet, one of said coil and said magnet moving relative to the other of said coil and said magnet by flowing a current to said coil, a support member supporting said magnet, and a metal surface subjected to mirror polishing and arranged in at least a portion between said coil and said support member.

In Applicant's opinion, Korenaga discloses a linear motor mechanism having a stator element and a movable element movable relative to the stator element in a predetermined direction through an electromagnetic drive force. The stator element has a yoke and coils disposed along a predetermined direction while the movable element has a magnet with plural magnetic poles but with no yoke. Plural stator elements are disposed opposed to each other with a magnet of the movable element disposed therebetween.

In Applicant's view, Li discloses a stage device in which the shift in the center of gravity of the stage device and the reaction force caused when at least one of first and second stage devices move, are canceled out by moving a moving member. The shift in the center of gravity of a stage device and the reaction force caused when the stage devices move that cannot be canceled out by moving the moving member, are completely canceled out by moving a base. Even if at least one of the first and second stages move, the center of gravity of the stage device does not move, and the reaction force are reliably canceled. By concurrently performing exposure on the two substrates mounted on the first and second stages, the exposure throughput can be improved, and an exposure with a high precision can be performed.

In accordance with the invention defined in newly added Claims 22 and 32, a metal film or metal surface subjected to mirror polishing is arranged in at least a portion between the coil and the member supporting a magnet of the linear motor. Advantageously, the metal film or metal surface subjected to mirror polishing suppresses transfer of heat in the linear motor operating in a vacuum atmosphere.

Korenaga may teach a linear motor having a stator with coils and a movable element that moves relative to the stator. The Korenaga disclosure at line 45 of column 10 only

discloses with respect to Fig. 16, that "Step S22 is a CVD process for forming an insulating film on the wafer surface." but is devoid of any suggestion of a metal film or metal surface subject to mirror polishing being in a portion between a coil and a magnet relatively moving with respect to the coil due to current flow in the coil in a linear motor. Accordingly, it is not seen that Korenaga in any manner teaches or suggests the feature of Claims 22 and 32 of a metal film or metal surface subjected to mirror polishing is arranged in at least a portion between the coil and the member supporting a magnet of the linear motor for the purpose of suppressing outflow of heat caused by radiation from the coil or magnet of the linear motor. Accordingly, it is believed that newly added Claims 22 and 32 are completely distinguished from Korenaga and are allowable thereover.

Li may teach making the closed space surrounded with the flat plate shaped member 68, the frame member 65, and the magnetic member 62 serve as a path for a coolant (refrigerant) to cool the armature coils 63 of the armature unit 61 at lines 50 to 54 of column 14. The flat plate shaped member 68 at lines 18 to 20 of column 14, however, is clearly disclosed as "made of a substantially nonmagnetic material such as ceramics and is integrally attached to the frame member 65 to close its upper opening." Accordingly, it is not seen that Li in any manner suggests the feature of Claims 22 and 32 of a metal film or metal surface subjected to mirror polishing is arranged in at least a portion between the coil and the member supporting a magnet of the linear motor.

With regard to the cited combination, Korenaga only discloses forming an insulating film on the wafer surface." but is devoid of any suggestion of a metal film or a metal surface subject to mirror polishing. Li only teaches a flat plate shaped member 68 made of a

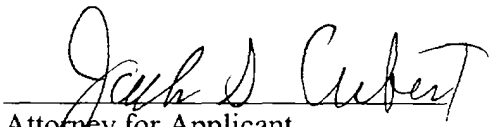
ceramic as part of a coolant path. Accordingly, it is not seen that the addition of Li's coolant path flat plate shaped ceramic member to the disclosure of Korenaga devoid of any suggestion of a metal film or metal surface subjected to mirror polishing in a linear motor could possibly suggest the feature of Claims 22 and 32 of a metal film or metal surface subjected to mirror polishing arranged in at least a portion between the coil and the member supporting a magnet of the linear motor. It is therefore believed that Claims 22 and 32 are completely distinguished from any combination of Korenaga and Li and are allowable.

The dependent claims depend from one or another of the independent claims and are believed allowable for the same reasons. Morcover, each of the dependent claims recite additional features in combination with the features of their respective independent claims and is believed allowable in its own right. Individual consideration of the dependent claims respectfully is requested.

Applicant believes that the present Amendment is responsive to each of the points raised by the Examiner in the Official Action and submit that the application is in condition for allowance. Favorable consideration of the claims and early passage to issue of the present application earnestly are solicited.

Applicant's attorney, Shawn W. Fraser, may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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